



# Commonwealth of Massachusetts Executive Office of Labor and Workforce Development

## BLOOD LEAD TESTING OF HOUSEPAINTERS

Richard Rabin  
Division of Occupational Safety  
Occupational Lead Poisoning Registry

Deval L. Patrick, Governor  
Timothy P. Murray, Lieutenant Governor

Joanne F. Goldstein, Secretary

George E. Noel, Director

Heather E. Rowe, Acting Commissioner,  
Division of Occupational Safety

# INTRODUCTION

- ▶ Occupational Lead Poisoning Registry
  - ▶ Lead Exposure of House Painters

Blood Lead Data

Renovation, Repair, Painting Rule  
(EPA)



# MASSACHUSETTS OCCUPATIONAL LEAD POISONING REGISTRY

Laboratory blood lead reports of adults  
Follow-up with workers, physicians, employers  
Data analysis, reports  
One of almost 40 state lead registries in US

## **PURPOSES OF THE REGISTRY**

inform workers about the hazards of lead and how exposures can be controlled

## **PURPOSES OF THE REGISTRY**

provide employers with the information and technical assistance necessary to control lead exposure

## **PURPOSES OF THE REGISTRY**

inform affected workers and employers about  
state and federal regulations regarding  
occupational lead exposure

## PURPOSES OF THE REGISTRY

provide consultation and advice to health care providers

- medical management
- OSHA Lead Standard

## **PURPOSES OF THE REGISTRY**

analyze, report the Lead Registry's data



## Jobs and Industries with Potential Lead Exposure

<i>General</i>	<i>Industry</i>
Lead production or smelting Brass, bronze, copper, or lead foundries Ammunition/explosives production Scrap metal handling Firing ranges Machining or grinding lead alloys Manufacture of radiation shielding Repair/replacement of refractory material in furnaces Ship building/repairing/breaking Mining	Battery manufacturing or recycling Automotive radiator repair Lead soldering Ceramic manufacturing Cable/wire stripping, splicing or production Rubber manufacturing Plastics manufacturing Leaded glass manufacturing Paint/pigment manufacturing
<i>Construction</i>	
Renovation, repair or demolition of structures with lead paint Welding or torch-cutting painted metal Sandblasting, sanding, scraping, burning, or disturbing lead paint	Use or disturbance of lead solder, sheeting, flashing, or old electrical conduits Plumbing, particularly in older buildings

# INTRODUCTION

---

## ■ Lead Hazards

### ■ Health effects

- Nervous system
- Reproductive system
- Kidney damage
- Blood
- Cancer
- Digestive system

## ■ High Exposure in House Painting

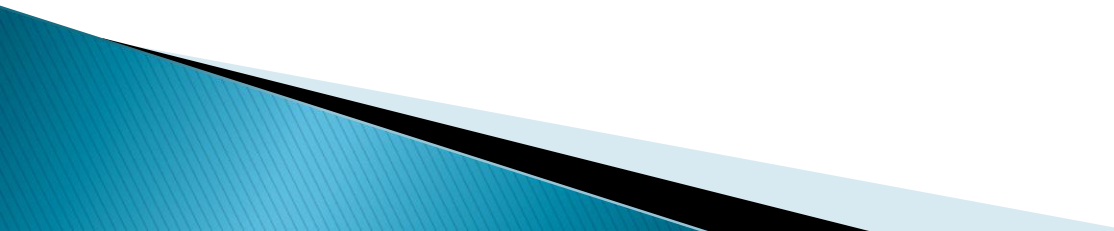
- Sanding
  - Heat gun
  - Dry scraping
  - $> 1000 \mu\text{g}/\text{m}^3$  (OSHA PEL:  $50 \mu\text{g}/\text{m}^3$ )
-

# Difficulties of Surveillance (BL testing)

## **Small size of employers**

- lack of knowledge of, and ability & desire to comply with, regulations**

## **Immigrants**

- language**
  - lack of knowledge of rights (ex: OSHA)**
  - fear of retaliation**
  - immigration authorities**
- 

# REASONS FOR BLOOD LEAD TESTS

## 2001 – 2007 (%)

Reason	CS Network	Other Painters	All Others
▶ Symptoms	18 (20)	53 (24)	19 (4)
▶ Pt. Request	21 (24)	80 (37)	54 (10)
▶ Med. Mon.	1 (1)	45 (21)	432 (82)
▶ Doctor	43 (48)	27 (12)	11 (2)
▶ Unknown	6 (7)	12 (6)	8 (2)
▶ Total	89 (100)	217 (100)	524 (100)

Figure 4. Proportion of interviewed cases in workplace medical monitoring programs by industry, MA 1996-2001 (n=211\*\*)

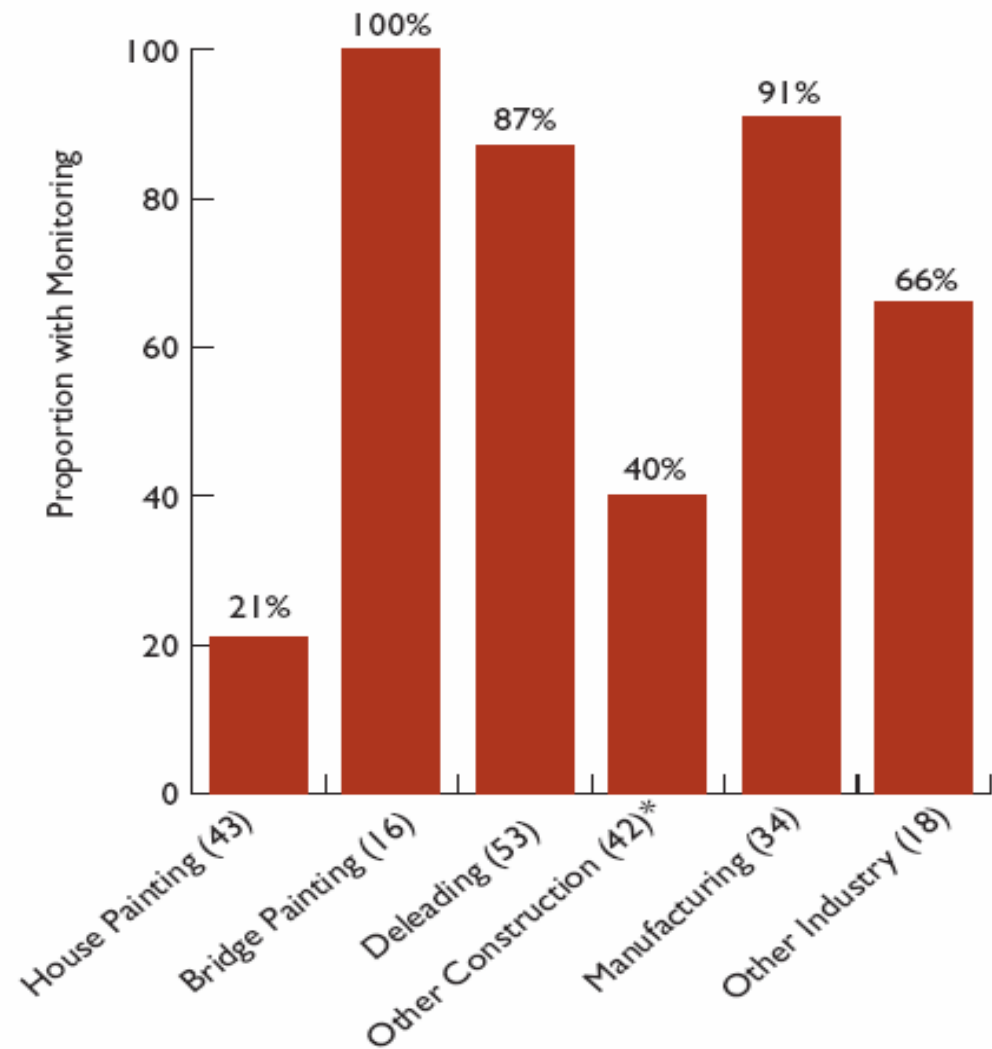
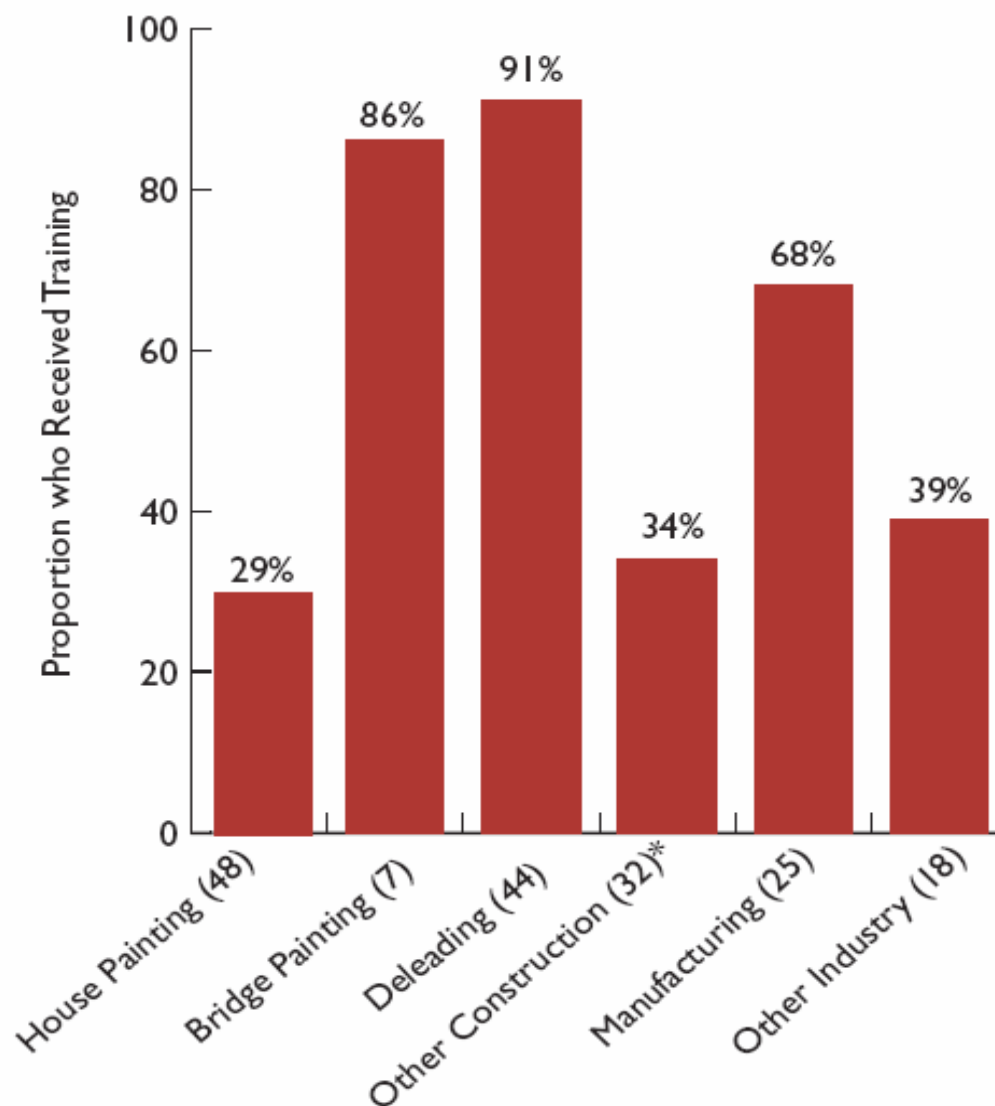


Figure 5. Proportion of interviewed cases who received lead safety training, by industry, MA 1996–2001 (n=174)



\*Includes painting, unspecified

# BLL SCREENING OF BRAZILIAN PAINTERS (N=61)

BLL ( $\mu\text{g}/\text{dl}$ )	Freq.	%
< 10	39	64
10 – 14	7	12
15 – 24	5	8
25 – 39	5	8
$\geq 40$	5	8

Adapted from: COBWEB, "A Report on Brazilian Immigrant Workers in Massachusetts," 2009



# PAINTERS' BLOOD LEADS MASSACHUSETTS OCCUPATIONAL LEAD REGISTRY

=> 25 mcg/dl (2001 – 2007)

▶ Painters	306 (37%)
▶ Others	524 (63%)
▶ Total	830 (100%)

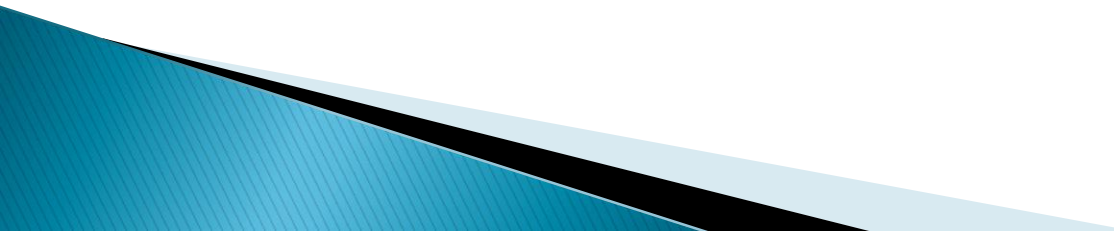


# Renovation, Repair, Painting Rule (EPA)

Applicability  
(effective April 2010)

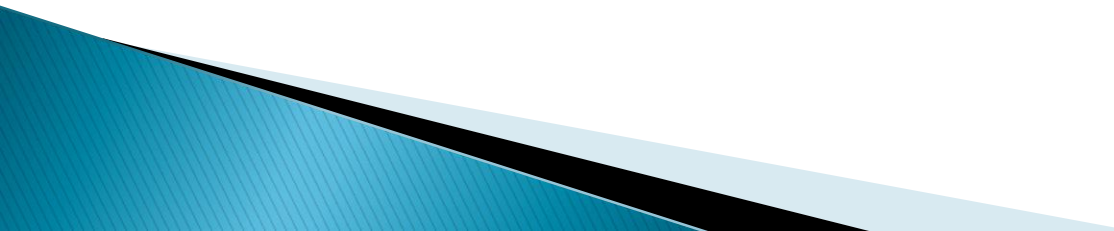
Housing, other child-occupied buildings built  
before 1978

Disturbing lead paint – scraping, sanding,  
demolition, etc.



# Renovation, Repair, Painting Rule (EPA)

## Requirements

- ▶ Training by EPA– or state–certified trainer
  - ▶ Certification by EPA or state
  - ▶ Work practices – prohibition of torch–burning, power methods without HEPA vac
- 

“Lead at Work”  
“Lead in Construction”

Rick Rabin

[Rick.rabin@state.ma.us](mailto:Rick.rabin@state.ma.us)

(617) 969-7177, x309

